



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/610,748 | 07/06/2000 | Young-Hwa Kim Ph. D. | 2539738-78377 | 5015 |

7590 01/03/2003

Steven M. Koehler
Westman, Champlin & Kelly
Suite 1600 - International Centre
900 Second Avenue South
Minneapolis, MN 55402-3319

EXAMINER

PIERCE, JEREMY R

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1771

DATE MAILED: 01/03/2003

18

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/610,748

Applicant(s)

KIM PH. D. ET AL.

Examiner

Jeremy R. Pierce

Art Unit

1771

mk-10

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28,29,34,35,41,42 and 80-99 is/are pending in the application.
- 4a) Of the above claim(s) 28,29,34,35,41,42 and 80-83 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 93-99 is/are allowed.
- 6) ☒ Claim(s) 84-88 and 90-92 is/are rejected.
- 7) ☒ Claim(s) 89 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Amendment B was filed on November 18, 2002 as Paper No. 9. Claims 1-27, 30-33, 36-40, and 43-79 have been cancelled. Claims 84-99 have been added. A new specification has been submitted. The amendment is sufficient to overcome the claim objections set forth in section 6 of the last Office Action and the 35 USC 112, 102, and 103 rejections set forth in sections 8, 10, 11, 13, and 14 of the last Office Action.

Election/Restrictions

2. Applicant's election of Group I in Paper No. 9 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 102/103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 84, 85, 87, 88, and 91 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Cunningham (U.S. Patent No. 5,601,895).

Cunningham discloses a flexible puncture proof material used in gloves (column 3, lines 10-60). The base layer provided by Cunningham would act as the flexible substrate (column 6, lines 50-51). Cunningham discloses metal plates are bonded to the base layer (column 8, lines 15-19). The metal plates can be about 5 mils thick (column 8, line 44). The metal plates are arranged to have gaps between them (column 7, lines 21-22), but Cunningham fails to disclose the gap width. However, since the glove is designed to be flexible and provide sufficient puncture resistance, the Examiner would argue that such a spacing between plates would be inherent to the material of Cunningham. If not, it would have been obvious to one having ordinary skill in the art to provide a spacing of 2 to 5 mils between the plates in order to adjust for the desired flexibility and puncture resistance, since it has been held that discovering an optimum valued of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). With regard to claim 85, the plates may be stainless steel (column 7, lines 29-30). With regard to claim 86, Cunningham discloses the thickness of the plates may be adjusted for flexibility (column 8, lines 7-14). It would have been obvious to one having ordinary skill in the art to use plates that are 2 mils thick in order to increase the flexibility of the glove, since it has been held that discovering an optimum valued of a result effective variable involves only routine skill in the art. With regard to claims 87 and 88, Cunningham discloses using hexagonal discs (column 9, lines 3-5). With regard to claim 91, the plates are affixed to the base layer with a silicone elastomer (column 6, lines 45-47).

Claim Rejections - 35 USC § 103

5. Claims 86 and 90 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cunningham.

Claim 86 recites the plates to be no greater than 2 mils thick. Since independent claim 84 says that the plate must be at least 2 mils thick, the Examiner assumes that claim 86 is citing, in a roundabout way, that the thickness of the plate is exactly 2 mils. Cunningham does not teach the thickness of the plates to be exactly 2 mils. However, lowering the thickness of the plate would allow for greater flexibility at the expense of being less puncture resistant. It would have been obvious to one having ordinary skill in the art to use plates that are 2 mils thick in Cunningham in order to gain additional flexibility, since it has been held that discovering an optimum valued of a result effective variable involves only routine skill in the art. With regard to claim 90, the plate thickness and the gap width variables that can be adjusted to gain the desired flexibility and puncture resistance. It would have been obvious to one having ordinary skill in the art to make them substantially equal, since it has been held that discovering an optimum valued of a result effective variable involves only routine skill in the art.

6. Claim 92 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cunningham in view of LeGrand et al. (U.S. Patent No. 4,861,666).

Cunningham uses silicone to bond the metal plates to the substrate (column 6, lines 45-47), but does not teach using polyurethane adhesive. LeGrand et al. disclose polyurethane and silicone are both well-known adhesives that are suitable in the art of puncture resistant material (column 3, lines 15-19). It would have been obvious to one

having ordinary skill in the art to use polyurethane adhesive instead of silicone adhesive, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Allowable Subject Matter

7. Claim 89 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claims 93-99 are allowed.

9. The following is a statement of reasons for the indication of allowable subject matter: With regard to claim 89, Cunningham does not disclose or suggest the base substrate to be nonwoven polyurethane and nylon synthetic leather. Additionally, no prior art can be found to indicate that nonwoven polyurethane and nylon synthetic leather would be obvious to use in the invention of Cunningham.

With regard to claims 93-99, a search of the prior art did not reveal using polymeric resin plates that have a wire mesh embedded in each plate. Although Ichiro et al. (JP 8-120574) disclose using polymeric resin plates for penetration resistance, there is nothing present in Ichiro et al. to disclose or suggest embedding a wire mesh in each plate.

Response to Arguments

10. Applicant's arguments with respect to claims 84-99 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy R. Pierce whose telephone number is (703) 605-4243. The examiner can normally be reached on Monday-Thursday 7-4:30 and alternate Fridays 7-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone numbers

Art Unit: 1771

for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Jeremy R. Pierce
Examiner
Art Unit 1771

December 30, 2002



TERREL MORRIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700